UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/767,857	01/24/2001	Keiji Hashimoto	1538.1008/JDH	3366

21171	7590	02/13/2004

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER
RAMPURIA, SATISH

ART UNIT	PAPER NUMBER
2124	

DATE MAILED: 02/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	**Application No.** 09/767,857	**Applicant(s)** HASHIMOTO ET AL.
	Examiner Satish Rampuria	**Art Unit** 2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>03</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>24 January 2001</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-21</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-21</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

4)☐ Interview Summary (PTO-413) Paper No(s). _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: .

Detailed Office Action

1. This office action is in response to the application files on January 24, 2000.

2. Claims 1-21 are pending.

Priority

3. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-

(d). The certified copies have been filed in parent Applications No. 2000-015296, filed on

January 25, 2000 and No. 2000-322402, filed on October 23, 2000.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3, 4, 5, 7, 8, 9, 10, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated

by Chigira et al. hereinafter called Chigira, US Patent No. 4,949,253.

As per claim 1, Chigira discloses:

- *An automatic program generation apparatus for automatically generating a program* (col.

1, lines 46-48 "provided an automatic program generation apparatus in a computer program

development support system")

- *that will perform a predetermined processing, comprising* (col. 1, lines 49-50 "input

information relating to manner of use of data")

- *a plurality of data structure resolution units* (col.2, lines 42-43 "a plurality of program part

prototypes as a program part prototype library")

- *that respectively include a model program* (col. 1, lines 52-53 "a processing unit for

generating program parts from the program part prototypes")

- *for a corresponding data structure* (col. 1, lines 54-56 "the input information is analyzed, one

of the program part prototypes stored in the memory unit is selected in accordance with the

analysis")

- *wherein said model program includes resolution logic for performing a setting peculiar to

said predetermined processing* (col. 2, lines 45-48 "the input information is analyzed, one of the

program part prototypes stored in the memory unit is selected in accordance with the analysis

(setting peculiar), and the selected program is modified in accordance with the analysis to

generate a program"). It is interpreted that input information is a setting indicating which

processor to select according to information.

- *and a resolution unit for generating a program* (col. 1, lines 52-53 "a processing unit for

generating program parts from the program part prototypes") *for performing said predetermined

processing* (col. 1, lines "63-64 "program is generated based on the selected (predetermined)

program part prototype") *by acquiring resolution information relating to* (col. 2, lines 39-40

"information relating to the manner of use of the data") said setting peculiar to said

predetermined processing for the resolution logic included *in said model program in said data*

structure resolution unit corresponding to a selected data structure (col. 2, lines 51-56 "The

program part to be generated is designated by the processing unit 22 which receives the data to

be processed by the program and the information relating to the manner of use of the data from

the input/output unit 21 through a general purpose text editor and analyzes it")

- and by synthesizing the model program and the resolution information for the resolution

logic. It is interpreted that resolution information and model program disclosed by Chigira must

synthesize in order to work logically also, because model program includes resolution logic unit

it must synthesize.

As per claim 3, the rejection of claim 1 is incorporated and further Chigira discloses:

 - the data structure resolution unit corresponding to the selected data structure is either a one

or a various types of data structure (col. 4, lines 23-25 "Through the function, one program

prototype can be flexibly applied to various data (structure) without addition or modification")

As per claims 4 and 9, the rejection of claim 1 is incorporated and further Chigira discloses:

- a first model program that prescribes a data structure comprising one or a plurality of record

types (col. 3, lines 31-32 "After the analysis, the processing unit 22 prepares the data attribute

analysis table shown in FIG. 5")

- and a link between record types if a plurality of record type exists, and that includes resolution

logic for performing a setting for said predetermined processing *as to said data structure* (col. 3,

lines 33-35 "the processing unit 22 selects one of the program part prototypes from the program

part prototype library by referring to the analysis (predetermined settings) table")

- and a second model program that includes resolution logic for performing a setting for said

predetermined processing as to an operation, *and that corresponds to a basic operation executed*

for said data structure (col.3, lines 24-28 "The input information designates the data declaration

statement to be processed by the program, the manner of use of the data (class) and the key

where the class designates the retrieval table").

Claim 5 it is inherent that if automatic program generations is perform it must be stored into a

storage device, and rejection of claim 1 is incorporated.

Claim 7 is the method claim corresponding to apparatus claim 1 and rejected under the same

reason set forth in connection of the rejection of claim 1 above.

Claim 8 is the method claim corresponding to apparatus claim 2 and rejected under the same

reason set forth in connection of the rejection of claim 2 above.

As per claims 10 and 13, Chigira discloses:

- wherein said first model program prescribes a simple type data structure (col. 2, lines 52-53

"the data (simple type) to be processed")

- comprising one kind of record type (col. 3, lines 12-13 "the preparation of a table (matrix type)

having data relating to the macro name")

- and includes resolution logic for providing an attribute for the record (col.3, lines 14-16 "The

processing unit 22 analyzes the input information of FIG.3 to prepare a data attribute analysis

table shown in FIG. 5")

- and wherein resolution logic for providing a setting in accordance with said predetermined

specification is embedded in said second model program (col.3, lines 24-28 "The input

information designates the data declaration statement to be processed by the program, the

manner of use of the data (class) and the key where the class designates the retrieval table").

- and said second model program is to execute at least addition, deletion, update, and search

operations for said record (col.3, lines 14-16 "The processing unit 22 analyzes the input

information of FIG.3 to prepare (at least addition, deletion, update) a data attribute analysis table

shown in FIG. 5").

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section
> 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the
> subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill
> in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

7.   Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chigira as

applied to claim 1 above in view of Stack, US Patent No. 6,257,774.

As per claim 2, the rejection of claims 1 and 5 respectively, is incorporated and further Chigira

does not explicitly disclose *input is from user*.

However, Stack discloses that application program generated via user input (col. 5, lines

24-28 "Within this environment, the system 10 operates to acquire and construct the application

structure and sequences 12 that correspond to a particular application program through the

application of user input").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

the invention was made to have user input the specs for program using user interface as taught by

Stack in the automatic program generation as taught by Chigira. The modification would be

obvious because of one of ordinary skill in the art would be motivated to have user interface in

generation of automatic program to define the requirements of the program.

Claim 6 it is inherent that if automatic program generations is performed, it must be stored into a

storage device, and rejection of claim 2 is incorporated.

8.   Claims 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chigira as

      applied to claim 1 above in view of Wahizaki, US Patent No. 5,212,634.

As per claims 11 and 14, the rejection of claim 9 is incorporated, and further Chigira does not

explicitly discloses the data structure type is a slip type.

However, Washizaki discloses *a slip type data structure* (col.1, lines 42-43 "a slip

processing program") *with one kind of header record type* (col. 2, line 67 "the sales slip

number") *one kind of detail record type* (col. 2, lines 67-69 "unit goods price, number of goods

sold 12, and total sales obtained by multiplying the unit goods price 11 by the number of goods

sold") *and links for linking said one header record type and one or a plurality of said detail

record types, and includes resolution logic for providing attributes for the header record and*

the detail record (col.4, lines 1-7 "A generated process... indicates a process... slip

number...found consistent of matched with ... slip number 16 at check step 3").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

the invention was made to have an apparatus for automatically generating a program include a

data structure of slip type as taught by Washizaki in corresponding to automatic program

generation as taught by Chigira. The modification would be obvious because of one of ordinary

skill in the art would be motivated to have data structure of slip to generate slips for with

information.

The limitation of executing record, addition, deletion, and search operation is disclosed

by Chigira as discussed in the rejection of claim 10.

9. Claim 12, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chigira

    as applied to claim 9 above in view of Webber et al, hereinafter called Webber, US Patent

    No. 5,331,546.

As per claims 12, 16 and 17, the rejection of claim 9 is incorporated, and further Chigira does

not explicitly discloses the *data structure is a type of time band, seat reservation, and plan* as

claimed.

However, Webber discloses the system to create itineraries using the data structure of

time and reservation type (col. 5 lines 34-38 "a storage device... include a tariff file, a traveler

file and a rules file... link... reservation system" and col. 6, lines 38-40 "reservation system to

check seat availability for...flight found" and col. 7, lines 16-17 "the origin and destination

locations and the time window or windows fro a trip). It is inherent that data structure is a plan

type, which stores records. Because in order to process proper for a model or function it must access a record.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the use of data structure to make reservations as taught by Webber in the method for automatic generating program as taught by Chigira. The modification would be obvious because of one of ordinary skill in the art would be motivated to have a system to make reservation automatically as suggested by Webber (Abstract, "A travel planner... automatically construct... available seats for a traveler's")

The limitation of executing record, addition, deletion, and search operation is disclosed by Chigira as discussed in the rejection of claim 10.

10. Claims 18, 20, and 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chigira as applied to claim 9 above in view of Schneier, hereinafter called Schneier, US Patent No. 5,850,516.

As per claims 18, 20, and 21, the rejection of claim 9 is incorporated, and further Chigira does not explicitly discloses the *data structure types of a composition, tree type or hierarchy*.

However, Schneier discloses a system using tree base data structure (col. 6, lines 25-40 "The tree structure are a type of data structure... plurality of leaf nodes... predetermined mathematical operation... lower level nodes" and col. 6, lines 25-36 "a first level... plurality of leaf nodes... and a top level (or root)... It is ...higher level (closer to the root) node having as its children the lower level (Father from the root) nodes from ... higher level nodes derived").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

the invention was made to incorporate the system using tree and hierarchy type data structure as

taught by Schneier in the method for automatically generating the program as taught by Chigira.

The modification would be obvious because of one of ordinary skill in the art would be

motivated to have a system using tree type database to analyze the security system as suggested

by Schneier (col. 3, lines 10-15).

The limitation of executing record, addition, deletion, and search operation is disclosed

by Chigira as discussed in the rejection of claim 10.

11. Claims 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chigira as

applied to claim 9 above in view of Suzuki et al, hereinafter called Suzuki, US Patent No.

6,470,323.

As per claims 15 and 19, the rejection of claim 9 is incorporated, and further Chigira does not

explicitly discloses the *data structure types of a stock and pedigree as claimed.*

However, Suzuki discloses system utilizing data structure of stock, and one kind record

(col. 3, lines 1-8 "The database... stores... transaction information... tracking customer

history... types of data structure... lists, tables" and col. 3, lines 15-16 "storage... storing

records... relating... sales management").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

the invention was made to have a data structure of types as explained above in a system as taught

by Suzuki in corresponding to automatically generating the program as taught by Chigira. The

modification would be obvious because of one of ordinary skill in the art would be motivated to

have a record or array into the system to generate program as suggested by Suzuki (col. 1 lines 31-36).

The limitation of executing record, addition, deletion, and search operation is disclosed by Chigira as claimed in claim 10.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patent is cited to further show the state of the art with respect to automatically generating program apparatus.

> US Patent No. 5,920,717 to Noda
>
> US Patent No. 6,405,361 to Broy et al.
>
> US Patent No. 5,485,601 to Ching
>
> US Patent No. 6,658,645 to Akuta et al.
>
> US Patent No. 5,381,548 to Matsuo
>
> US Patent No. 4,831,580 to Yamada

The following patents are cited to further show the state of the art with respect to various type of data structure.

> US Patent No. 6,502,236 to Allen et al.
>
> US Patent No. 6,442,522 to Carberry et al.
>
> US Patent No. 6,055,537 to LeTourneau

13. Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Satish Rampuria whose telephone number is 703-305-8891. The

examiner can normally be reached on 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kakali Chaki can be reached on (703) 305-9662. The fax phone number for the

organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-3900.

Satish S. Rampuria
Examiner
Art Unit 2124

02/09/04

KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100